

Attorney Docket No.: J3734(C)
Serial No.: 10/579,649
Filed: May 18, 2006
Confirmation No.: 9363

REMARKS

Claim 11 has been cancelled without prejudice. New claim 13 specifies that the composition is free of opacifiers that are other than components (b), (c), (d) and (e). See, for example, page 19, lines 28 and 29; page 2, lines 27 to 31; page 1, lines 18 to 29; and page 6, lines 15 to 20. Entry of the subject amendments is respectfully requested.

Claims 1-12 stand rejected under 35 U.S.C. 103(a) over Kruger (EP0956850) in view of Pings (US5,482,703) and Sun et al. (US 6,613,316). This rejection is respectfully traversed.

As noted in the subject application, rinse-off hair conditioners typically comprise an aqueous dispersion of fatty material and cationic surfactant. The combination of fatty material and cationic surfactant forms a dispersion that may be described as translucent, semi-opaque or opalescent. To provide for a more opaque appearance, it is common to incorporate particles of relatively high refractive index materials known as opacifiers. The use of conventional opacifiers, for example glycol distearate, water-insoluble styrene or acrylic polymers or copolymers or metal oxides, may, however, deposit on the hair giving rise to a dully, heavy or greasy feeling for some users.

Pursuant to this invention it was found that the opacity of a hair conditioner formulation comprising a fatty material comprising from 12 to 22 carbon atoms, selected from the group consisting of fatty alcohols, fatty acids, alkoxylated fatty alcohols and

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mixtures thereof, can be improved by the use of a particular combination of cationic surfactant and alkali metal halide. More specifically, it has been found that opacity can be improved by employing in such compositions (a) a combination of specific amounts of (i) an alkyl trimethylammonium salt, wherein the alkyl group is selected from C16 to C22 saturated alkyl chains, (ii) a dialkylethyldimethylammonium salt wherein the alkyl chains are selected from C16 to C22 saturated or unsaturated alkyl chains and mixtures thereof and (iii) an alkali metal halide and (b) **a particular ratio of alkyltrimethylammonium salt to dialkylethyl dimethylammonium salt.**

The table at page 22 of the specification compares lightness data for Example 1, a composition within the scope of the subject invention (which composition included a combination of cetyltrimethylammonium chloride, dipalmitoylethyl dimethylammonium chloride (in a weight ratio of about 4.8:1, an amount within the claimed range), potassium chloride and cetyl alcohol), Comparative Example A (a composition that included cetyltrimethylammonium chloride, dipalmitoylethyl dimethylammonium chloride (in weight ratio of about 4.8:1), and cetyl alcohol, but that contained no alkali metal salt), and Comparative Example B (a composition that included cetyltrimethylammonium chloride, potassium chloride, and cetyl alcohol, but that contained no dialkylethyl dimethylammonium salt). Example 1 was found to have greater opacity and to be visually perceivable as whiter than both Comparative Examples A and B.

Kruger is directed to a hair care formulation that includes a quaternary ammonium compound and an ethyl hydroxyethyl cellulose ether. Kruger includes alkyl

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trimethylammonium salts and dialkylethyldimethylammonium salts in its list of suitable quats (which list further includes dialkyldimethylammonium salts, as well as other diesterquats and monoesterquats), noting further that either a single quat or a mixture of the listed quats may be employed. There is, however, nothing in Kruger that discloses or suggests the claimed ratio of alkyltrimethylammonium salt and dialkylethyldimethyl ammonium salt. Further, there is nothing in Kruger that discloses or suggests the subject combination of alkyltrimethylammonium salt, dialkylethyl dimethylammonium salt and alkali metal halide or the use thereof as a means of providing conditioner compositions of improved opacity. In the compositions exemplified therein, the only quaternary ammonium salt present was cetrimonium chloride. Moreover, the only disclosure of an alkali metal salt is in the specification given for the exemplified ethyl hydroxyethyl cellulose (Elfacos® CD 481 from Akzo Nobel). The specification indicates that the Akzo Nobel material is an off-white powder that contains $\leq 4\%$ sodium chloride and $\leq 4\%$ water. Thus, **sodium chloride need not even be present** in the cellulose component of the claimed composition. In short, there is nothing in the disclosure of Kruger that could reasonably be construed as disclosing the claimed combination of alkyltrimethylammonium salt, dialkylethyl dimethylammonium salt and alkali metal halide, let alone the use of such a composition as a means of improving the opacity of a conditioner composition that includes a fatty material as described by the subject claims.

Pings is directed to hair conditioning compositions that comprise specified amounts of silicone conditioning agent, dimethicone copolyol, lipid vehicle material and cationic surfactant. Pings discloses the use of potassium chloride as a rheology

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modifying agent, however, there is nothing in the citation that discloses the subject combination of alkyltrimethylammonium salt and dialkylethyl dimethylammonium salt.

Sun et al. discloses a hair conditioner composition that include a fatty alcohol together with a combination of certain monoalkyl and dialkyl quats in a weight ratio of monoalkyl quat to dialkyl quat of from about 15:1 to 2:1. While Sun et al. includes examples of compositions that include a combination of cetrimonium chloride and dipalmitylidimonium chloride, **dialkylethyl dimethylammonium salts** are not among the quats therein disclosed. Although its compositions are described as being opaque, the degree of opacity is not described and is seemingly the opacity associated with the presence of fatty material. See, for example the Abstract which discloses the following:

The present invention relates to an aqueous opaque hair conditioner which comprises a monoalkyl quat from C14 to higher Carbon chain lengths (preferably C16 to C22) and a dialkyl quat which is a mixture of C16, C16 dialkyl quat and a dialkyl quat which is a mixture of C18, C18 dialkyl quat. **Also included is an amount of fatty alcohol to opacify the conditioner.** (Emphasis added.)

It is respectfully submitted that Pings and Sun et al. do not cure the deficiencies of Kruger and that even, if combined, the subject combination of alkyltrimethylammonium salt, dialkylethyl dimethylammonium salt and alkali metal halide are not reasonably disclosed. Further, it is respectfully submitted that there is nothing in the combined citations that discloses such combination as a means of improving the opacity of a fatty material-containing conditioner composition.

Accordingly, it is respectfully submitted that the referenced Office Action fails to reasonably establish a case of prima facie obviousness against the subject claims.

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In view of the foregoing amendments and remarks, reconsideration and allowance of the subject claims is respectfully requested.

If a telephone conversation would be of assistance in advancing the prosecution of the present application, applicants' undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Karen E. Klumas', is written over a horizontal line.

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